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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/844,112	04/27/2001	Kiichi Ihara	450100-03184	1001

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EXAMINER

PARSONS, CHARLES E

ART UNIT	PAPER NUMBER
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2613

DATE MAILED: 11/17/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/844,112

Applicant(s)

IHARA, KIICHI

Examiner

Charles E Parsons

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Radha et al PN 6,806,909.

Claim 1, 19, 26 - 28: A transport stream generation system for generating a single output

transport stream by switching a plurality of transport streams comprising:

a switching means for generating the single output transport stream by switching the plurality of transport streams on a per transport stream packet basis; and (See column 10 lines 19-23)

a control means for controlling said switching means referencing the PCR information, the PTS information, and the DTS information extracted by said extractor means, (See column 10 lines 19-33, lines 57-64 as well as column 9 lines 48-58)

wherein there is arranged, within a predetermined period of time in the vicinity of a switching point of said switching means, a time gap during which a transport packet containing information relating to the plurality of transport streams is not output from said switching means, and said control means controls said switching means to switch the plurality of transport streams within the time gap. (See column 13 lines 19-63.)

an extractor means for extracting Program Clock Reference (PCR) information, Presentation Time Stamp (PTS) information, and Decoding Time Stamp (DTS) information contained in the plurality of transport streams;

Art Unit: 2613

See Radha column 2 lines 25-45 teaching that all streams encoded using the MPEG standard have this information within the header. Furthermore this information must be extracted in order to determine where the seamless splice points are see column 9 lines 48-57 as well as column 11 lines 45-67. While Radha does not explicitly mention an extraction means it would have been obvious to one of ordinary skill in the art to use an extraction means to extract header information for use in splicing video sequences.

2. A signal transmission method according to claim 1, wherein said stream output means causes the Program Specific Information (PSI) and the Program Clock Reference (PCR) to coincide with each other in timing and period and the transmission periods of the PSI and the PCR in the output stream are set to be a predetermined period. (The MPEG 2 standard requires that the PSI and the PCR be in synchronization with each other.) Official Notice Served

3, 10. A signal transmission method according to claim 2, wherein said stream is created by packetizing a picture element signal, and wherein any stream containing information is not transmitted at the switching of streams by controlling the stream output means so that the finish end of the Group of Pictures (GOP) is transmitted prior to the switching of the streams while the start end of a next GOP is transmitted subsequent to the switching of the streams. (See column 3 lines 47-64 as well as column 11 lines 24-60)

Claim 4, 11. A signal transmission method according to claim 3, wherein the continuity of the picture sequencer the Presentation Time Stamp (PTS) and the Decoding Time Stamp (DTS) in the output stream is assured in the output stream by synchronizing the Groups of Pictures (GOPs) prior to and subsequent to the stream switching across the stream output means. (At the time the invention was made that the splice in and splice out

Art Unit: 2613

points corresponded with the I frames of GOP's see column 18 lines 26-38 as well as column 5 showing that the splice in a splice out points are aligned thus synchronized.)

Claim 5. A signal transmission method according to claim 3, wherein the stream output means is controlled so that a first Group of Pictures (GOP) subsequent to the stream switching becomes a closed GOP. (According to applicants specification a closed GOP is one that does not depend on another GOP. Therefore see column 3 lines 60-64 teaching that this is an inherent feature to GOP's. Furthermore at the time the invention was made that the splice in and splice out points corresponded with the I frames of GOP's see column 18 lines 26-38 as well as column 5 showing that the splice in a splice out points are aligned thus synchronized.

6, 12. A signal transmission method according to claim 3, wherein the stream output means is controlled so that the start end of a first Group of Pictures (GOP) subsequent to the stream switching becomes the start end of a Packetized Elementary stream (PES) tagged with a Presentation Time Stamp (PTS). (Packetized Elementary streams are tagged with Presentation Time Stamps as required by the MPEG standard see column 12 lines 30-32)

Claim 7: A signal transmission method according to claim 2 wherein said stream is created by packetizing a voice element signal, and wherein any stream containing information is not transmitted at the switching of streams by controlling the stream output means so that the transmission of the finish end of a voice encoding unit is completed prior to the stream switching while the start end of a next voice encoding unit is transmitted subsequent to the stream switching. (See column 11 lines 24-60)

Claim 8. A signal transmission method according to claim 7, wherein the continuity of the Presentation Time Stamp (PTS) in the output stream is assured by synchronizing the

Art Unit: 2613

voice encoding units prior to and subsequent to the stream switching across the stream output means. (See column 11 lines 24-60)

Claim 9. A signal transmission method according to claim 7, wherein the stream output means is controlled so that the start end of a first voice encoding unit subsequent to the stream switching becomes the start end of a Packetized Elementary Stream (PES) tagged with a Presentation Time Stamp (PTS). (See column 11 lines 37-45)

Claim 13, 17 and 24. A signal transmission method according to claim 1, wherein said stream is created by packetizing information signal relating to service information. (The type of stream being packetized is not considered patentable considering that no unexpected result is achieved nor is it disclosed to serve any particular purpose different from that of the prior art. Therefore it is deemed to be a matter of design choice and in the case of a TMCC stream, this is a standard used by Japanese broadcasters and this feature would have been obvious to include since it is required in Japan.)

14, 23. A signal transmission method according to claim 1 wherein said stream is created by packetizing information signal relating to individual information about receiving means for receiving said output stream. (At the time the invention was made it was well known in the art that receivers typically sent out information about the amount of data they could handle of video content they were subscribed to. I.e a typical cable TV box sent this information to the provider.) Official notice served

15, 16. A signal transmission method according to claim 1, wherein said stream is created by packetizing a scrambled signal, and wherein control information containing a scramble key is synchronized across said stream output means for streaming, and the continuity of the scramble key is assured subsequent to the stream switching. (Since cable and

Art Unit: 2613

satellite TV signals are scrambled and decoded at the receiver, it would be required to assure the continuity of the scramble key so that the content is intelligible.) Official notice served

20. A signal transmission apparatus according to claim 19, comprising as said plurality of stream output means:

a stream output means which outputs a stream by encoding, packetizing, and multiplexing signals of picture element data or voice element data on a real time basis; means which outputs a stream by reproducing a prerecorded stream; and a stream output means which outputs a stream by adjusting the timing of streams supplied from outside. (See figure 7a-7d as well as figure 8)

21. A signal transmission apparatus according to claim 19, comprising as said plurality of stream output means:

a stream output means which outputs a stream for displaying picture element data in a standard format; and a stream output means Which outputs a stream for displaying picture element data at a definition higher than that of said standard format.

(At the time the invention was made it was well known in the art that both a standard definition signal as well as a High definition signal should be transmitted since not all TV at the time the invention was made were capable of receiving High definition signals. Therefor it would have been obvious to one of ordinary skill in the art to include an output means for each) Official notice served.

22. A signal transmission apparatus according to claim 19, comprising a selector means which receives said signals from which the stream is formed by said plurality of stream output means, and selects, from among said signals, the signal used by one of said plurality of

Art Unit: 2613

stream output means; and a redundancy stream output means which outputs a stream using the signal selected by said selector means, wherein said stream Output means supplies said control means with an operation monitoring signal indicating whether the generation of the stream is correctly in progress, and wherein when said control means detects through the operation monitoring signal any stream output means which fails to create correctly the stream, said control means controls said selector means to supply said redundancy stream output means with the signal which was supplied to the stream output means that failed to create correctly the stream, and said control means controls said stream switching means to use the stream output from the redundancy stream output means rather said stream output means which failed to create correctly the stream. (See figure 11 this is the typical operation of set top boxes at the time the invention was made.)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E Parsons whose telephone number is 703-305-3862. The examiner can normally be reached on M-TH 7AM to 5 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.


Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 09/844,112

Page 8

Art Unit: 2613

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